LIST OF CONTENTS

Number 1

A. F. Maged, M. Ashry and **G. A. M. Amin**	1	Characterization of evaporated selenide semiconductor alloy on p-type substrates
A. Wolkenberg, T. Przesławski, J. Kaniewski and **K. Regiński**	7	Experimental confirmation by galvanomagnetic methods of a complex transport model in $In_{0.53}Ga_{0.47}As$ layers deposited by MBE on SI-InP
G. Vaitheeswaran, V. Kanchana and **M. Rajagopalan**	15	Theoretical studies on the high pressure phases of Lanthanum monochalcogenides
V. C. S. Reynoso, K. Yukimitu, T. Nagami, C. L. Carvalho, J. C. S. Moraes and **E. B. Araújo**	27	Crystallization kinetics in phosphate sodium-based glass studied by DSC technique
A. Sali, M. Fliyou, H. Satori and **H. Loumrhari**	31	The effect of a strong magnetic field on the binding energy and the photoionization process in quantum-well wires
S. Israel, R. Saravanan, N. Srinivasan and **R.K. Rajaram**	43	High resolution electron density mapping for LiF and NaF by maximum entropy method (MEM)
R. Saravanan, Y. Ono, M. Isshiki, K. Ohno and **T. Kajitani**	51	Electron density distribution in GaAs using MEM
Z. Sun, X. H. Chen, R. Fan, X. G. Luo and **L. Li**	59	Structure and magnetic properties of perovskite $Sr_2CuNbO_{6-\delta}$
Q. Meng, L. Fu, J. Lin, H. Zhang, S. Wang, Y. Zhou, M. Yu and **F. Liu**	63	Preparation and characterization of a layered transparent luminescent thin film of silica–CTAB–$Tb(acac)_3$ composite with mesostructure
G. A. Kumar, E. De la Rosa-Cruz, A. Martinez, N. V. Unnikrishnan and **K. Ueda**	69	Influence of borate content on the radiative properties of Nd^{3+} ions in fluorophosphate glasses
M. A. Ruman and **A.K. Rastogi**	77	Polymorphism in Cu-substituted GaV_4S_8: structural and electronic properties
A. Travlos, N. Salamouras and **N. Boukos**	87	Growth of rare earth silicides on silicon
M. A. P. Silva, V. Briois, M. Poulain, Y. Messaddeq and **S. J. L. Ribeiro**	95	SiO_2–PbF_2–CdF_2 glasses and glass ceramics
Z. G. Ivanova, V. S. Vassilev, E. Cernoskova and **Z. Cernosek**	107	Physicochemical, structural and fluorescence properties of Er-doped Ge–S–Ga glasses
D. Hreniak, E. Zych, L. Kępiński and **W. Stręk**	111	Structural and spectroscopic studies of Lu_2O_3/Eu^{3+} nanocrystallites embedded in SiO_2 sol–gel ceramics
C. Z. Tan	121	Optical interference in overtones and combination bands in α-quartz
P. K. Jha and **S. P. Sanyal**	127	High pressure behavior of NpSe and NpTe
D. K. Durga and **N. Veeraiah**	133	Role of manganese ions on the stability of ZnF_2–P_2O_5–TeO_2 glass system by the study of dielectric dispersion and some other physical properties

LIST OF CONTENTS

Number 1

A. F. Maged, M. Ashry and **G. A. M. Amin**	1	Characterization of evaporated selenide semiconductor alloy on p-type substrates
A. Wolkenberg, T. Przesławski, J. Kaniewski and **K. Regiński**	7	Experimental confirmation by galvanomagnetic methods of a complex transport model in $In_{0.53}Ga_{0.47}As$ layers deposited by MBE on SI-InP
G. Vaitheeswaran, V. Kanchana and **M. Rajagopalan**	15	Theoretical studies on the high pressure phases of Lanthanum monochalcogenides
V. C. S. Reynoso, K. Yukimitu, T. Nagami, C. L. Carvalho, J. C. S. Moraes and **E. B. Araújo**	27	Crystallization kinetics in phosphate sodium-based glass studied by DSC technique
A. Sali, M. Fliyou, H. Satori and **H. Loumrhari**	31	The effect of a strong magnetic field on the binding energy and the photoionization process in quantum-well wires
S. Israel, R. Saravanan, N. Srinivasan and **R.K. Rajaram**	43	High resolution electron density mapping for LiF and NaF by maximum entropy method (MEM)
R. Saravanan, Y. Ono, M. Isshiki, K. Ohno and **T. Kajitani**	51	Electron density distribution in GaAs using MEM
Z. Sun, X. H. Chen, R. Fan, X. G. Luo and **L. Li**	59	Structure and magnetic properties of perovskite $Sr_2CuNbO_{6-\delta}$
Q. Meng, L. Fu, J. Lin, H. Zhang, S. Wang, Y. Zhou, M. Yu and **F. Liu**	63	Preparation and characterization of a layered transparent luminescent thin film of silica–CTAB–$Tb(acac)_3$ composite with mesostructure
G. A. Kumar, E. De la Rosa-Cruz, A. Martinez, N. V. Unnikrishnan and **K. Ueda**	69	Influence of borate content on the radiative properties of Nd^{3+} ions in fluorophosphate glasses
M. A. Ruman and **A.K. Rastogi**	77	Polymorphism in Cu-substituted GaV_4S_8: structural and electronic properties
A. Travlos, N. Salamouras and **N. Boukos**	87	Growth of rare earth silicides on silicon
M. A. P. Silva, V. Briois, M. Poulain, Y. Messaddeq and **S. J. L. Ribeiro**	95	SiO_2–PbF_2–CdF_2 glasses and glass ceramics
Z. G. Ivanova, V. S. Vassilev, E. Cernoskova and **Z. Cernosek**	107	Physicochemical, structural and fluorescence properties of Er-doped Ge–S–Ga glasses
D. Hreniak, E. Zych, L. Kępiński and **W. Stręk**	111	Structural and spectroscopic studies of Lu_2O_3/Eu^{3+} nanocrystallites embedded in SiO_2 sol–gel ceramics
C. Z. Tan	121	Optical interference in overtones and combination bands in α-quartz
P. K. Jha and **S. P. Sanyal**	127	High pressure behavior of NpSe and NpTe
D. K. Durga and **N. Veeraiah**	133	Role of manganese ions on the stability of ZnF_2–P_2O_5–TeO_2 glass system by the study of dielectric dispersion and some other physical properties

A. S. H. Hameed, G. Ravi, A. N. Azariah, T. Mahalingam and **P. Ramasamy** 147 Growth and optical characterization of organic nonlinear optical crystal: indole-3-aldehyde

P. Yang, M. Lü, D. Xu, D. Yuan and **C. Song** 155 Photoluminescence characteristics of ZnS nanocrystallites co-doped with Cu^{2+} and Cd^{2+}

Short communications

V. N. Popov, N. H. March and **V. E. Van Doren** 159 Estimation of the cleavage force of crystalline semiconductors with diamond and zinc-blende structure

S. Kamoun, M. Gargouri, T. Mhiri and **A. Daoud** 161 Phase transition and analysis of AC conductivity data of the $(Cs)_{0.26}(Rb)_{0.74}H(SO_4)_{0.89}(SeO_4)_{0.11}$ compound

A. N. Papathanassiou 171 Study of the polarizable centers in single crystal dolomite ($CaMg(CO_3)_2$) rich in Fe^{3+} impurities by thermally stimulated depolarization current spectroscopy

Number 2

Z. He and **J. Ma** 177 Constitutive modeling of the densification of PZT ceramics

G. M. Wang, D. A. Papaconstantopoulos and **E. Blaisten-Barojas** 185 Pressure induced transitions in calcium: a tight-binding approach

R. N. Panda, M. F. Hsieh, R. J. Chung and **T. S. Chin** 193 FTIR, XRD, SEM and solid state NMR investigations of carbonate-containing hydroxyapatite nano-particles synthesized by hydroxide-gel technique

C. Li, J. L. Hoe and **P. Wu** 201 Empirical correlation between melting temperature and cohesive energy of binary Laves phases

M. Yang and **S. Zhang** 213 The relationship between chemical bond properties and Stokes shift of Eu^{2+} in some silicate host lattices

Z. Li and **L. Gao** 223 Synthesis and characterization of MCM-41 decorated with CuO particles

S. Waplak, W. Bednarski and **A. Ostrowski** 229 Electron paramagnetic resonance investigation of $K_3H(SO_4)_2$ proton conductor doped with Cr^{5+} ion

R. Shaheen, M. J. Akhtar, M. Nadeem and **M. N. Haque** 237 Atomistic computer simulation studies of Sr_2RuO_4 and Ca_2RuO_4

A. A. Bol, R. van Beek, J. Ferwerda and **A Meijerink** 247 Temperature dependence of the luminescence of nanocrystalline CdS/Mn^{2+}

S. Daviero, L. Montagne, G. Palavit, G. Mairesse, S. Belin and **V. Briois** 253 EXAFS, XANES and ^{31}P double-quantum MAS-NMR of $(50-x/2)Na_2O–xBi_2O_3–(50-x/2)P_2O_5$ glasses

R. V. S. S. N. Ravikumar, R. Komatsu, K. Ikeda, A. V. Chandrasekhar, B. J. Reddy, Y. P. Reddy and **P. S. Rao** 261 EPR and optical studies on transition metal doped $LiRbB_4O_7$ glasses

W. Dong and **C. Zhu** 265 Optical properties of surface-modified Bi_2O_3 nanoparticles

A. Knizhnik, G. M. Reisne, I. Direktovich, G. E. Shter, G. S. Grader and **Y. Eckstein** 273 Equilibrium of 1:2:3 CLBLCO superconductors with oxygen: effect of cooling upon the oxygen content and the homogeneity of its distribution

C. M. Fang, G. A. de Wijs, E. Orhan, G. de With, R. A. de Groot, H. T. Hintzen and **R. Marchand**	281	Local structure and electronic properties of $BaTaO_2N$ with perovskite-type structure
H. Liu, R. A. Secco, N. Imanaka, M. D. Rutter, G. Adachi and **T. Uchida**	287	Ionic to electronic dominant conductivity in $Al_2(WO_4)_3$ at high pressure and high temperature
Q. Li, Z. Han, M. Shao, X. Liu and **Y. Qian**	295	Preparation of cerium hydroxycarbonate by a surfactant-assisted route
M. M. Mohamed and **I. Mekkawy**	299	Electrical and chemical characteristics of nano-meter gold encapsulated in mesoporous and microporous channels and cages of FSM-16 and Y zeolites
V. Dmitriev, V. Sinitsyn, R. Dilanian, D. Machon, A. Kuznetsov, E. Ponyatovsky, G. Lucazeau and **H. P. Weber**	307	In situ pressure-induced solid-state amorphization in $Sm_2(MoO_4)_3$, $Eu_2(MoO_4)_3$ and $Gd_2(MoO_4)_3$ crystals: chemical decomposition scenario
I. Nowik and **R. H. Herber**	313	Metal atom motional anisotropy in iron organometallics: the Gol'danskii–Karyagin effect in a dinuclear iron tetrahydrido complex
F. Micali, M. C. Abramo and **C. Caccamo**	319	Bulk properties of C_{76} and C_{84} fullerites studied by MD simulation based on a central two body intermolecular potential
Z. Klencsár, E. Kuzmann, Z. Homonnay, A. Vértes, A. Simopoulos, E. Devlin and **G. Kallias**	325	Interplay between magnetic order and the vibrational state of Fe in $FeCr_2S_4$
Q. Y. Zhang, K. Pita and **C. H. Kam**	333	Sol–gel derived zinc silicate phosphor films for full-color display applications
B. Jin, P. He, Y. Sheng and **B. Yang**	339	The growth mechanism of SiC film from polyimide LB film
D. Louca	343	Lattice effects in solids under hydrostatic pressure by neutron pair density function analysis
M. S. Jang, S. H. Oh, K. H. Lee, J. H. Bahng, J. C. Choi, K. H. Jeong, H. L. Park, D. C. Choo, D. U. Lee and **T. W. Kim**	357	The dependence of the strain effects on the ZnTe layer thicknesses in ZnTe/GaAs heterostructures
S. Sahoo and **A. Roy**	361	Elastic strain at the interface in Ge clusters on Si substrate—a Raman spectroscopic measurement

Number 3

S. Kumar, M. Hussain, T. P. Sharma and **M. Husain**	367	Characterization of $PbSe_{1-x}Te_x$ thin films
Y.-m. Kang, Z. Xie, Z. An, Y.-c. Li and **N.-x. Chen**	377	Nonlinear electron–lattice interaction on excited states in polythiophene
J.-S. Jung, K.-H. Choi, W.-S. Chae, Y.-R. Kim, J.-H. Jun, L. Malkinski, T. Kodenkandath, W. Zhou, J. B. Wiley and **C. J. O'Connor**	385	Synthesis and characterization of Ni magnetic nanoparticles in AlMCM41 host

T. Kanai, S.-i. Ohkoshi and **K. Hashimoto**	391	Magnetic, electric, and optical functionalities of $(PLZT)_x(BiFeO_3)_{1-x}$ ferroelectric–ferromagnetic thin films
W. Dong, C. Zhu and **H.-J. Bongard**	399	Preparation and optical properties of UV dye DMT-doped silica films
B. Winkler, K. Knorr, M. Hytha, V. Milman, V. Soto and **M. Avalos**	405	Crystal chemistry of molybdenum phosphides from density functional theory calculations
G. G. N. Angilella, F. E. Leys, N. H. March and **R. Pucci**	413	Linear response function around a localized impurity in a superconductor
A. Shimizu and **H. Tachikawa**	419	Thermal behavior of hydrogen atom intercalated between two layers of $C_{150}H_{30}$ graphite plane: MD simulation
Z. Wang, S. K. Saxena, P. Lazor and **H. S. C. O'Neill**	425	An in situ Raman spectroscopic study of pressure induced dissociation of spinel $NiCr_2O_4$
Y.-m. Kang, N.-x. Chen and **J. Shen**	433	Lattice vibration of $Ce_{1-x}Sc_xFe_4Al_8$
M. Finazzi, R. Piovoso, N. E. Massa, A. H. Jubert, G. Romanelli, J. Jios and **J. C. Autino**	443	Spectroscopic and theoretical study in substituted *N*-phenoxyethylanilines
S. H. Liu, X. F. Qian, J. Yin, X. D. Ma, J. Y. Yuan and **Z. K. Zhu**	455	Preparation and characterization of polymer-capped CdS nanocrystals
S. Ozgen and **O. Adiguzel**	459	Molecular dynamics simulation of diffusionless phase transformation in a quenched NiAl alloy model
X.-Y. Kuang, Q.-Q. Gou and **K.-W. Zhou**	465	Study of antiferromagnetic phenomenon for oxo-bridged iron (III) dimers in model molecules of methemerythrin
V. Hornebecq, C. Elissalde, V. Porokhonskyy, V. Bovtun, J. Petzelt, I. Gregora, M. Maglione and **J. Ravez**	471	Dielectric relaxation in tetragonal tungsten bronze ceramics
K. Kawano, S. B. Madhu, M. Mizutamari and **R. Nakata**	477	Paramagnetic properties of the spinel-type $Al_{1-x}Mn_x$-sulphate salts for its pillared intercalation into a clay mineral
C. F. Song, P. Yang, M. K. Lü, D. Xu, D. R. Yuan and **Z. Q. Liu**	491	Enhanced blue emission from Eu, Dy co-doped sol–gel Al_2O_3–SiO_2 glasses
B. Soulé de Bas, H. E. Dorsett and **M. J. Ford**	495	The electronic structure of Be and BeO: benchmark EMS measurements and LCAO calculations
K. Iketani, Ren-De Sun, M. Toki, K. Hirota and **O. Yamaguchi**	507	Sol–gel-derived TiO_2/poly(dimethylsiloxane) hybrid films and their photocatalytic activities
E. Ruiz-Trejo, G. Tavizón and **A. Arroyo-Landeros**	515	Structure, point defects and ion migration in $LaInO_3$
P. Huang, Hu Ping and **M. G. Zhao**	523	Theoretical examination of optical and EPR spectra for Cu^{2+} ion in K_2PdCl_4 crystal
J. Mao and **R. B. McLellan**	527	Vacancy concentrations in metals in equilibrium with H_2-gas at high pressures
H. C. Gupta, M. K. Singh and **L. M. Tiwari**	531	A lattice dynamical investigation of Raman and infrared wavenumbers at the zone center of the orthorhombic $NdNiO_3$ perovskite

Number 4

S. J. Moon, K. H. Lee, J. C. Choi, H. L. Park, D. C. Choo, Y. S. No and **T. W. Kim**	535	The dependence of the structural and optical properties on the Te mole fraction in $ZnS_{1-x}Te_x$/GaAs heterostructures
S. H. Deulkar, C. H. Bhosale, M. Sharon and **M. Neumann-Spallart**	539	Preparation of non-stoichiometric (Zn,Fe)S chalcogenides and evaluation of their thermal, optical and electrical properties
C. P. Moca, M. Crişan, E. Macocian and **C. Horea**	545	Field-theoretical description of the crossover between BCS and BEC in a non-Fermi superconductor
R. H. Chen, R. Y. Chang, C. S. Shern and **T. Fukami**	553	Structural phase transition, ionic conductivity, and dielectric investigations in $K_3H(SO_4)_2$ single crystals
O. Alvarez-Fregoso, O. Zelaya-Angel and **J. G. Mendoza-Alvarez**	565	Thermoreflectance studies in CdNiTe nanocrystalline films
L. Duclaux, J. P. Salvetat, P. Lauginie, T. Cacciaguera, A. M. Faugère, C. Goze-Bac and **P. Bernier**	571	Synthesis and characterization of SWNT-heavy alkali metal intercalation compounds, effect of host SWNTs materials
P. N. Lisboa-Filho, A. W. Mombrú, H. Pardo, W. A. Ortiz and **E. R. Leite**	583	Influence of processing conditions on the crystal structure and magnetic behavior of $La_{0.7}Ca_{0.3}MnO_{3\pm\delta}$ samples
M. E. Pronsato, G. Brizuela and **A. Juan**	593	The electronic structure of iron hydride
K. Papagelis and **S. Ves**	599	Infrared spectroscopy and lattice dynamical calculations of $Gd_3Al_5O_{12}$, $Tb_3Al_5O_{12}$ and $Lu_3Al_5O_{12}$ single crystals
Y. Deng, J. Wu, J. Liu, G.-d. Wei and **C.-W. Nan**	607	Hydrothermal growth and characterization of $La(OH)_3$ nanorods and nanocables with $Ni(OH)_2$ coating
G. D. Mukherjee, S. N. Achary, A. K. Tyagi and **S. N. Vaidya**	611	High pressure AC resistivity and compressibility study on $Al_2(WO_4)_3$
J. Liqiang, S. Xiaojun, C. Weimin, X. Zili, D. Yaoguo and **F. Honggang**	615	The preparation and characterization of nanoparticle TiO_2/Ti films and their photocatalytic activity
M.-Y. Kim, W.-T. Kim, M.-S. Jin, S.-A. Park, S.-H. Choe, C.-Il Lee, S.-C. Hyun and **C.-D Kim**	625	Impurity optical absorption of Co^{2+}-doped $BaGa_2S_4$, $BaGa_2Se_4$, $BaIn_2S_4$, and $BaIn_2Se_4$ single crystals
J.-G. Kang, J-P. Hong, S.-J. Won and **C.-O. Kim**	631	Photophysics of RbCl co-doped with Eu^{2+} and Eu^{3+}
R. P. Sreekanth Chakradhar, K. P. Ramesh, J. L. Rao and **J. Ramakrishna**	641	Mixed alkali effect in borate glasses—EPR and optical absorption studies in xNa_2O–$(30-x)K_2O$–$70B_2O_3$ glasses doped with Mn^{2+}
S. Acharya, D. Bhattacharjee and **G. B. Talapatra**	651	Monolayer characteristics and spectroscopic study of benz(*b*)fluoranthene assembled in Langmuir Blodgett films mixed with stearic acid
A. Chandra Bose, P. Balaya, P. Thangadurai and **S. Ramasamy**	659	Grain size effect on the universality of AC conductivity in SnO_2
O. Svitelskiy and **J. Toulouse**	665	Translational and rotational mode coupling in disordered ferroelectric $KTa_{1-x}Nb_xO_3$ studied by Raman spectroscopy

T. Asthalter, H. Franz, U. van Bürck, K. Messel, E. Schreier and **R. Dinnebier** 677 Structure and dynamics of octamethyl-ethinyl-ferrocene: an organometallic rotator phase

J. Balmaseda, E. Reguera, J. Fernández, A. Gordillo and **H. Yee-Madeira** 685 Behavior of Prussian blue-based materials in presence of ammonia

H.-N. Dong, S.-Y. Wu and **W.-C. Zheng** 695 Theoretical investigation of EPR parameters for two trigonal Yb^{3+} centers in $LiNbO_3$ and $LiNbO_3$:MgO crystals

A. Saig, A. Danon, Y. Finkelstein, G. Kimmel and **J. E. Koresh** 701 A continuous polymorphic transition of coordinating water molecules in $CuSO_4 \cdot 5H_2O$

C. Harikuttan Unnithan, P. Predeep and **S. Jayakumar** 707 Doping effect of copper in germanium tellurium semiconducting glass system

R. S. de Biasi and **M. L. N. Grillo** 711 Evidence for clustering in Fe^{3+} -doped CaO

Number 5

S. Lazarev, D. Mirianić, Lj. Mitranić and **M. Pantić** 715 Dielectric properties of ultrathin films of molecular crystals.

N. S. Gaikwad, V. M. Nikale and **C. H. Bhosale** 723 Substrate dependent properties of electrodeposited EuTe thin films

E. Kandyel 731 Synthesis, structural and physical properties of new Terbium containing Tb–Hg–Sr–Ca–Cu–O superconducting system

L. Kovács, K. Lengyel, A. Baraldi, R. Capelletti, M. Berkowski and **W. Ryba-Romanowski** 741 Hydroxyl ion absorption in $LaGaO_3$ single crystals

T. Konno, Y. Sonobe, G. Muramoto, M. Itou, I. Mamada, H. Okamoto, H. Kaneko and **Y. Ishihara** 749 Electrical properties of a quasi-one-dimensional compound Nb_3Te_4 inserted with indium: $In_xNb_3Te_4$

C. M. Ngabireng, P. Woafo and **T. C. Kofane** 759 Static properties of two-component kink in a non-linear discrete polarizability model

M. A. Ahmed and **S. T. Bishay** 769 Thermal studies of the electrical conductivity of LiCoYb-ferrites

P. Du, C. Song, W. Weng, G. Han and **G. Shen** 777 Effects of carbon additions on crystallinity and resistivity in Si–C–H thin films deposited by CVDs

R. Merkle, J. H. V. J. Brabers, H.-U. Habermeier and **J. Maier** 785 Thermogravimetric investigation of the relation between oxygen stoichiometry, temperature and oxygen partial pressure in $Nd_{1-x}Ca_xMnO_{3+\delta}$ perovskites ($x \approx 0.5$)

K. K. Dey, D. Banerjee and **R. Bhattacharya** 793 Explanation of the temperature variation of Hall coefficient of doped bismuth

T. Ishizaka, S. Tero-Kubota, Y. Kurokawa and **T. Ikoma** 801 EPR studies on defects in sol-gel derived alumina films

A. Shimizu and **H. Tachikawa** 807 Thermal behaviors of lithium in and on the two layers of $C_{150}H_{30}$ graphite plane: MD simulation

A. Dalvi and **K. Shahi**	813	Characterization and electrochemical cell characteristics of mechanochemically synthesized AgI–Ag_2O–MoO_3 amorphous superionic system
M. A. El-Oyoun, G. M. Shurit, A. Gaber and **N. Afify**	821	Differential scanning calorimetric study of Ga_5Se_{95} glass
A. Marbeuf, Ll. Casas, E. Estop and **D. Mikaïlitchenko**	827	From all-atom vision to molecular pairwise-interactions: the mean-field approach in molecular alloys
C. B. Rodella and **V. R. Mastelaro**	833	Structural characterization of the V_2O_5/TiO_2 system obtained by the sol–gel method
P. I. Paulose, G. Jose, V. Thomas, N. V. Unnikrishnan and **M. K. R. Warrier**	841	Sensitized fluorescence of Ce^{3+} /Mn^{2+} system in phosphate glass
M. R. R. Raju and **R. N. P. Choudhary**	847	Diffuse phase transition in $Sr_5RTi_3Nb_7O_{30}$ (R=La, Nd and Sm)
S. M. Khalil	855	Effect of Y^{3+} substitution for Ca on the transport and mechanical properties of $Bi_2Sr_2Ca_{1-x}Y_xCu_2O_{8+\delta}$ system
L. G. Wang, M. Šob and **Z. Zhang**	863	Instability of higher-energy phases in simple and transition metals
I. V. Belova and **G. E. Murch**	873	Diffusion in nanocrystalline materials
S. Israel, R. Saravanan, N. Srinivasan and **S. K. Mohanlal**	879	An investigation on the bonding in MgO, CaO, SrO and BaO from the MEM electron density distributions
Z.-Y. Yang, C. Rudowicz and **Y.-y. Yeung**	887	Spin Hamiltonian and structural disorder analysis for two high temperature Cr^{3+} defect centers in α-$LiIO_3$ crystals—low symmetry effects

Number 6

R. V. G. Rao and **R. Venkatesh**	897	Valence force field theory, elastic, acoustic and thermodynamic properties and a potential function of TeO_2 glass
V. Srivastava, A. K. Bandyopadhyay, P. K. Jha and **S. P. Sanyal**	907	High pressure phase transition and elastic properties of cerium chalcogenides and pnictides
T.-H. Fang and **W.-J. Chang**	913	Effects of AFM-based nanomachining process on aluminum surface
L. Ehm, K. Knorr, F. Mädler, H. Voigtländer, E. Busetto, A. Cassetta, A. Lausi and **B. Winkler**	919	High-pressure X-ray diffraction study on α-PbF_2
Y. Zhang, M. Ma, X. Wang, D. Fu, H. Zhang, N. Gu, J. Liu, Z. Lu, L. Xu and **K. Chen**	927	Second-order optical nonlinearity of surface-capped CdS nanoparticles and effect of surface modification
A. R. Lim, O. H. Han and **S.-Y. Jeong**	933	The local structure of Cs(I) and Cs(II) in a Cs_2ZnCl_4 single crystal studied by nuclear magnetic resonance
M. Brynda, C. Dutan, T. Berclaz, M. Geoffroy and **G. Bernardinelli**	939	Intramolecular motion in the triptycenegermanyl radical: single crystal EPR study at variable temperature and DFT calculations
A. Knizhnik, A. N. Men and **Y. Eckstein**	947	Equilibrium of 1:2:3 CLBLCO superconductors with oxygen: reaction equation, thermodynamics and improvement of homogeneity

T. Kolodiazhnyi and **A. Petric** 953 Analysis of point defects in polycrystalline $BaTiO_3$ by electron paramagnetic resonance

P. S. Kumar, P. Balaya, P. S. Goyal and **C. S. Sunandana** 961 Effect of Cu-substitution on the conductivity of Ag-rich AgI–CuI solid solutions

N. Shepherd and **R. E. Hummel** 967 A model for the electroluminescence of spark-processed Si

H. Tototzintle-Huitle, E. Prokhorov, A. Mendoza-Galván, J. E. Urbina and **J. González-Hernández** 975 Study of the formation of Co_3O_4 thin films using sol–gel method

K. Sbai and **S. Belaaouad** 981 Chemical preparation, crystal structure, thermal behavior and IR studies of barium thallium cyclotriphosphate dihydrate

R. K. Das and **G. S. Tripathi** 993 Electronic structure of PbSnMnTe at high carrier densities

O. Roubeau, M. deVos, A. F. Stassen, R. Burriel, J. G. Haasnoot and **J. Reedijk** 1003 Trapping of metastable high-spin species and weak cooperativity in a mononuclear Fe(II) spin-crossover system

H. A. Radovan, E. Behne, R. J. Zieve, J. S. Kim, G. R. Stewart, W.-K. Kwok and **R. D. Field** 1015 Heavy-ion irradiation of UBe_{13} superconductors

X. Duan, D. Yuan, X. Cheng, Z. Sun, H. Sun, D. Xu and **M. Lv** 1021 Spectroscopic properties of Co^{2+} : $ZnAl_2O_4$ nanocrystals in sol–gel derived glass–ceramics

Number 7

P. Subbalakshmi and **N. Veeraiah** 1027 Optical absorption and fluorescence properties of Er^{3+} ion in $MO–WO_3–P_2O_5$ glasses

L. L. Díaz-Flores, R. Ramírez-Bon, A. Mendoza-Galván, E. Prokhorov and **J. González-Hernández** 1037 Impedance spectroscopy studies on SnO_2 films prepared by the sol–gel process

T. Bak, J. Nowotny, M. Rekas and **C. C. Sorrell** 1043 Defect chemistry and semiconducting properties of titanium dioxide: I. Intrinsic electronic equilibrium

T. Bak, J. Nowotny, M. Rekas and **C. C. Sorrell** 1057 Defect chemistry and semiconducting properties of titanium dioxide: II. Defect diagrams

T. Bak, J. Nowotny, M. Rekas and **C. C. Sorrell** 1069 Defect chemistry and semiconducting properties of titanium dioxide: III. Mobility of electronic charge carriers

T. Bak, T. Burg, S. -J. L. Kang, J. Nowotny, M. Rekas, L. Sheppard, C. C. Sorrell, E. R. Vance, Y. Yoshida and **M. Yamawaki** 1089 Charge transport in polycrystalline titanium dioxide

N. Rajic, N. Z. Logar, A. Golobic and **V. Kaucic** 1097 Synthesis and structure determination of a chain-like aluminophosphate obtained with 1,2-diaminopropane as the structure-directing agent

E. C. P. E. Rodrigues and **P. Olivi** 1105 Preparation and characterization of Sb-doped SnO_2 films with controlled stoichiometry from polymeric precursors

A. H. Yahaya, M. Z. b. Hussein and **W. S. Seh** 1113 Ion exchange study of carbonate, nitrate and dioctyl sulfosuccinate with anthraquinone-2-sulphonate encapsulated in inorganic layered structures

K. J. Hong, J. W. Jeong, T. S. Jeong, C. J. Youn, W. S. Lee, J. S. Park and **D. C. Shin**	1119	Photocurrent study of the valence band splitting of $AgInS_2$ epilayers on GaAs
S. Gupta and **S. C. Goyal**	1125	Pressure derivatives of bulk and shear modulus of rare gas solids
P. S. Anantha and **K. Hariharan**	1131	Enhanced ionic conduction in $NaNO_3$ by dispersed oxide inclusions
E. Poonguzhali, R. Srinivasan, R. Venkatesan, R. V. S. S. N. Ravikumar and **P. Sambasiva Rao**	1139	Variable temperature EPR study for confirming dynamic Jahn–Teller distortion in Cu(II) doped zinc ammonium phosphate hexahydrate
M. Shao, Q. Li, L. Kong, W. Yu and **Y. Qian**	1147	The synthesis of hollow CdS nanospheres packed with square subunits
S. U. Cortezão, W. M. Pontuschka, M. S. F. Da Rocha and **A. R. Blak**	1151	Depolarisation currents (TSDC) and paramagnetic resonance (EPR) of iron in amethyst
F. M. Reicha, M. Ishra and **M. M. Gabr**	1157	On the physical and electrical properties of poly propenal prepared by electropolymerization technique
J. Dong and **P. Deng**	1163	Temperature dependent emission cross-section and fluorescence lifetime of Cr,Yb:YAG crystals
N. A. de Oliveira	1173	Magnetic field effect on doped Kondo insulators
H. Tanaka, T. Honma, Y. Benino, T. Fujiwara and **T. Komatsu**	1179	YAG laser-induced β-BaB_2O_4 crystalline dot formation in Sm_2O_3–BaO–B_2O_3 glasses
A. K. Singh and **R. N. P. Choudhary**	1185	Structural, dielectric and electrical properties of $Pb_{5-x}La_{1+x}Ti_{3+x}Nb_{7-x}O_{30}$ (x=0, 1 and 2) ceramics
N. Y. Garces, M. M. Chirila, H. J. Murphy, J. W. Foise, E. A. Thomas, C. Wicks, K. Grencewicz, L. E. Halliburton and **N. C. Giles**	1195	Absorption, luminescence, and electron paramagnetic resonance of molybdenum ions in $CdWO_4$
V. V. Sinitsyn, O. Lips, A. F. Privalov, F. Fujara and **I. V. Murin**	1201	Transport properties of LaF_3 fast ionic conductor studied by field gradient NMR and impedance spectroscopy
X. Zhang and **L. Wang**	1207	Substantial Ca doping site effect on structure of $La_{0.5}Ca_{0.5}MnO_3$ at low temperature
D. Hui-Ning, Z. Wen-Chen, W. Shao-Yi and **T. Sheng**	1213	Explanations of g factors and hyperfine structure parameters for Dy^{3+} ion in YVO_4 crystal
T. D. Anthopoulos and **T. S. Shafai**	1217	Electrical properties of α-nickel phthalocyanine/aluminium interfaces: effects of oxygen doping and thermal annealing
I. Nowik and **R. H. Herber**	1225	Erratam

Number 8

	1227	Referees
I. Sougandi, R. Venkatesan and **P. S. Rao**	1231	Electron paramagnetic resonance of vanadyl ions in cadmium sodium phosphate hexahydrate single crystals: two locations for VO(II)

P. K. Jha and **S. P. Sanyal**	1237	Structural phase transition and high-pressure behaviour of curium and uranium monobismuthides
R. F. de Farias	1241	Molybdenum oxide-organosilane hybrids through sol–gel process
X. Lin-Hua, H. Ping and **Z. Min-Guang**	1247	Unified explanation for optical and high-pressure spectra of Ni^{2+} ions in ZnS crystal
A. A. Lavrentyev, B. V. Gabrelian, I. Ya. Nikiforov, J. J. Rehr and **A. L. Ankudinov**	1251	Ab initio calculations of the electron structure of the compounds $AgGaS_2$, $CdGa_2S_4$, $InPS_4$
T. Mochida, S. Suzuki, I. Takasu and **T. Sugawara**	1257	Synthesis, crystal structure, and dielectric constants of 9-hydroxy-5-iodophenalen-1-one and its deuteroxy analogue
R. B. Beeken, J. J. Garbe and **N. R. Petersen**	1261	Cation mobility in the Cu_6PS_5X (X=Cl, Br, I) argyrodites
V. L. Solozhenko, E. G. Solozhenko, P. V. Zinin, L. C. Ming, J. Chen and **J. B. Parise**	1265	Equation of state and phase stability of turbostratic carbon nitride
Y. K. Kim and **H. M. Jang**	1271	Polarization leakage and asymmetric Raman line broadening in microwave dielectric $ZrTiO_4$
W.-J. Chang and **T.-H. Fang**	1279	Influence of temperature on tensile and fatigue behavior of nanoscale copper using molecular dynamics simulation
F. E. Leys, C. Amovilli, I. A. Howard, N. H. March and **A. Rubio**	1285	Surface charge model of a carbon nanotube: self-consistent field from Thomas–Fermi theory
P. Solarz and **W. Ryba-Romanowski**	1289	Effect of temperature and activator concentration on relaxation of excited states of Eu^{3+} in $K_5Li_2La_{1-x}Eu_xF_{10}$ crystals
A. M. Saleh, A. K. Hassan and **R. D. Gould**	1297	DC conduction processes and electrical parameters of the organic semiconducting zinc phthalocyanine, ZnPc, thin films
P. B. Roy and **S. B. Roy**	1305	Temperature effects on a new equation of state of solids
Yu. F. Zhukovskii, P. W. M. Jacobs and **M. Causá**	1317	On the mechanism of the interaction between oxygen and close-packed single-crystal aluminum surfaces
Y.-t. Yang and **S.-y. Zhang**	1333	Photoacoustic spectroscopy study on the co-fluorescence effect of Eu^{3+}–La^{3+}–Hba solid complexes
B. D. P. Raju, K. V. Narasimhulu, N. O. Gopal and **J. Lakshmana Rao**	1339	EPR and optical absorption studies on VO^{2+} ions in $KZnClSO_4{\cdot}3H_2O$ single crystals—an observation of superhyperfine structure
F. Köksal and **Y. Yerli**	1349	Electron paramagnetic resonance of gamma irradiated $[(CH_3)_4N]InCl_4$ and $[(CH_3)_4N]_2CdCl_4$ single crystals
L. Pejov and **V. M. Petruševski**	1353	Latent symmetry versus accidental degeneracy effects in the vibrational spectra of dopant chromate anions in $M_2Cr_xS_{1-x}O_4$ solid solutions (M∈{K, Rb, Cs})
R. S. de Biasi and **M. L. N. Grillo**	1365	Evidence for clustering in Mn^{2+}-doped CeO_2
W. Zheng, C. Guan, L. Zhao and **Y. Xu**	1371	The correlation of doping ions to holographic storage properties of Mg:Mn:Fe:$LiNbO_3$ crystals
M. A. Gabal	1375	Non-isothermal decomposition of NiC_2O_4–FeC_2O_4 mixture aiming at the production of $NiFe_2O_4$

S. Mrowec and Z. Grzesik 1387 The influence of chromium on the defect structure and their mobility in nonstoichiometric cobaltous oxide

Y. Oren, A. Tamir, Y. Lederman and Z. Gavra 1395 Dilatometric and electrochemical studies on hydrogen transport through RuO_2 coated on palladium

L. Z. Ismail, M. I. Youssif and H. M. A. Moneim 1405 The effect of oxygen plasma generated by different microwave modes on $NdBa_2Cu_3O_{6+\delta}$ superconductor: structure and IR studies

P. Baláž, L. Takacs, E. Boldižárová and E. Godočíková 1413 Mechanochemical transformations and reactivity in copper sulphides

C. Rudowicz, Z.-Y. Yang, Y.-y. Yeung and J. Qin 1419 Crystal field and microscopic spin Hamiltonians approach including spin–spin and spin–other-orbit interactions for d^2 and d^8 ions at low symmetry C_3 symmetry sites: V^{3+} in Al_2O_3

1429 Errata

1431 Errata

1433 Errata

Numbers 9–10

D. Lincot and A. Zunger 1435 Foreword to: ICTMC

D. Y. Shahriari, N. Erdman, U. T. M. Haug, M. C. Zarzyczny, L. D. Marks and K. R. Poeppelmeier 1437 Direct synthesis of $AgInO_2$

T. Koyanagi, H. Harima, A. Yanase and H. Katayama-yoshida 1443 Materials design of p-type transparent conducting oxides of delafossite $CuAlO_2$ by super-cell FLAPW method

H. Katayama-Yoshida and K. Sato 1447 Spin and charge control method of ternary II–VI and III–V magnetic semiconductors for spintronics: theory vs. experiment

A. J. Freeman and Y.-J. Zhao 1453 Advanced tetrahedrally-bonded magnetic semiconductors for spintronic applications

K. Sato, G. A. Medvedkin, T. Ishibashi, S. Mitani, K. Takanashi, Y. Ishida, D. D. Sarma, J. Okabayashi, A. Fujimori, T. Kamatani and H. Akai 1461 Novel Mn-doped chalcopyrites

R. Bacewicz, J. Filipowicz, S. Podsiadło, T. Szyszko and M. Kamiński 1469 Probing local order in (Ga,Mn)N alloys by X-ray absorption spectroscopy

J. Z. Tao and A. W. Sleight 1473 Free energy minimization calculations of negative thermal expansion in $AlPO_4$-17

S. F. Chichibu, Y. Harada, M. Sugiyama and H. Nakanishi 1481 Metalorganic vapor phase epitaxy of $Cu(Al_xGa_{1-x})(S_ySe_{1-y})_2$ chalcopyrite semiconductors and their band offsets

H. Metzner, Th. Hahn, J. Cieslak, J. Eberhardt, M. Müller, U. Reislöhner, U. Kaiser, A. Chuvilin, J. Kräußlich and W. Witthuhn 1491 Structural properties of MBE grown $Cu(In,Ga)S_2$ layers on Si

K. Ramanathan, F. S. Hasoon, S. Smith, D. L. Young, M. A. Contreras, P. K. Johnson, A. O. Pudov and **J. R. Sites** 1495 Surface treatment of $CuInGaSe_2$ thin films and its effect on the photovoltaic properties of solar cells

O. Lundberg, J. Lu, A. Rockett, M. Edoff and **L. Stolt** 1499 Diffusion of indium and gallium in $Cu(In,Ga)Se_2$ thin film solar cells

L. X. Shao, K. H. Chang, T. H. Chung, B. H. Tseng and **H. L. Hwang** 1505 Steps toward industrialization of Cu-III-VI_2 thin-film solar cells: a novel full in-line concept

A. Kato, M. Yamazaki, H. Najafov, K. Iwai, A. Bayramov, C. Hidaka, T. Takizawa and **S. Iida** 1511 Radiative and non-radiative processes of Ce related transitions in $CaGa_2S_4$ and $SrGa_2S_4$

A. N. Georgobiani, V. V. Styrov, V. I. Tyutyunnikov, B. G. Tagiev, O. B. Tagiev and **R. B. Djabbarov** 1519 Radical-recombination luminescence, ion-luminescence and photoluminescence of $CaGa_2S_4$:Eu

E. Iliopoulos, K. F. Ludwig Jr. and **T. D. Moustakas** 1525 Complex ordering in ternary wurtzite nitride alloys

S. Shirakata, M. Kondow and **T. Kitatani** 1533 Optical properties of GaInNAs/GaAs prepared by molecular beam epitaxy

R. Weihrich, S. F. Matar and **E. Betranhandy** 1539 In search of new candidates for ultra-hard materials: the ternary BC_3N_3 stoichiometry

J. E. Jaffe and **A. Zunger** 1547 Defect-induced nonpolar-to-polar transition at the surface of $CuInSe_2$

A. Meeder, L. Weinhardt, R. Stresing, D. F. Marrón, R. Würz, S. M. Babu, T. Schedel-Niedrig, M. Ch. Lux-Steiner, C. Heske and **E. Umbach** 1553 Surface and bulk properties of $CuGaSe_2$ thin films

I. M. Kötschau and **H. W. Schock,** 1559 Depth profile of the lattice constant of the Cu-poor surface layer in $(Cu_2Se)_{1-x}(In_2Se_3)_x$ evidenced by grazing incidence X-ray diffraction

L. I. Koroleva and **R. Szymczak,** 1565 Ferromagnetic–antiferromagnetic state in manganites

M. A. Subramanian, W. J. Marshall, T. G. Calvarese and **A. W. Sleight** 1569 Valence degeneracy in $CaCu_3Cr_4O_{12}$

R. Laiho, K. G. Lisunov, E. Lähderanta, J. Salminen, M. A. Shakhov, V. S. Stamov, P. A. Petrenko and **V. S. Zakhvalinskii** 1573 Non-universal low-field magnetic scaling and variable-range hopping conductivity as a consequence of disorder in $La_{1-x}Ca_xMn_{1-y}Fe_yO_3$

E. I. Rogacheva 1579 Self-organization processes in impurity subsystem of solid solutions

O. Pagès, M. Ajjoun, T. Tite, D. Bormann, E. Tournié, M. Ducarroir, O. Maksimov and **M. C. Tamargo** 1585 Percolation context in mixed crystals with mechanical contrast

M. Turcu and **U. Rau** 1591 Fermi level pinning at $CdS/Cu(In,Ga)(Se,S)_2$ interfaces: effect of chalcopyrite alloy composition

K. Allakhverdiev, F. Gashimzade, T. Kerimova, T. Mitani, T. Naitou, K. Matsuishi and **S. Onari**	1597	Raman scattering under pressure in $ZnGa_2Se_4$
I. M. Tiginyanu, V. V. Ursaki, F. J. Manjón and **V. E. Tezlevan**	1603	Raman scattering study of pressure-induced phase transitions in $A^{II}B_2^{III}C_4^{VI}$ defect chalcopyrites and spinels
J. Warczewski and **J. Krok-Kowalski**	1609	Magnetic, electrical and structural properties of some ternary and quaternary spinels with chromium
W. R. L. Lambrecht and **S. N. Rashkeev**	1615	First-principles calculations of second-order optical response functions in chalcopyrite semiconductors
S. Siebentritt and **S. Schuler**	1621	Defects and transport in the wide gap chalcopyrite $CuGaSe_2$
S. M. Wasim, C. Rincón, G. Marín and **R. Márquez**	1627	Electrical conduction in ordered defect compounds
V. Aubin, L. Binet, P. Stallworth and **J. F. Guillemoles**	1633	ESR and NMR studies of $CuInSe_2$ crystals having controlled component activities
K. Otte, G. Lippold, H. Neumann and **A. Schindler**	1641	Hydrogen in $CuInSe_2$
J. M. Merino, M. Di Michiel and **M. León**	1649	Structural analysis of $CuInSe_2$ and $CuIn_3Se_5$ at different temperatures with synchrotron radiation
M. Laügt, E. Bellet-Amalric, P. Ruterana and **F. Omnès**	1653	An X-ray and TEM study of inhomogeneous ordering in $Al_xGa_{1-x}N$ layers grown by MOCVD
C. Domain, S. Laribi, S. Taunier and **J. F. Guillemoles**	1657	Ab initio calculation of intrinsic point defects in $CuInSe_2$
W. Prellier, E. R. Buzin, B. Mercey, Ch. Simon, M. Hervieu and **B. Raveau**	1665	Strain effects in charge-ordered $Pr_{0.5}Ca_{0.5}MnO_3$ manganite thin films
N. Tsuboi, Y. Takahashi, S. Kobayashi, H. Shimizu, K. Kato and **F. Kaneko**	1671	Delafossite $CuAlO_2$ films prepared by reactive sputtering using Cu and Al targets
M. Sasaki and **M. Shimode**	1675	Fabrication of bipolar $CuInO_2$ with delafossite structure
N. V. Joshi and **J. Luengo**	1681	Detection of $^4T_1(P)$ quartet of Co^{2+} in $Zn_{99.95}Co_{0.05}Se$ monocrystal by optical absorption spectroscopy
N. V. Joshi, H. Medina, A. Cantarero and **O. Ambacher**	1685	Mid gap photoluminescence from GaN:Mn, a magnetic semiconductor
G. A. Medvedkin, P. G. Baranov and **S. I. Goloshchapov**	1691	Ferromagnetic properties of $(Zn,Mn,Ge)P_2$ layers on diamagnetic $ZnGeP_2$ single crystal substrates
S. Picozzi, A. Continenza and **A. J. Freeman**	1697	First principles study of electronic and magnetic properties of Co_2MnGe/GaAs interfaces
G. Orudzhev, N. Mamedov, H. Uchiki, N. Yamamoto, S. Iida, H. Toyota, E. Gojaev and **F. Hashimzade**	1703	Band structure and optical functions of ternary chain $TlInSe_2$
O. Z. Alekperov	1707	Layered character of dielectric function in $TlGaSe_2$ at phase transition from exciton spectroscopy

A. Kato, M. Nishigaki, N. Mamedov, M. Yamazaki, S. Abdullayeva, E. Kerimova, H. Uchiki and **S. Iida**	1713	Optical properties and photo-induced memory effect related with structural phase transition in $TlGaS_2$
C. Guillén and **J. Herrero**	1717	Characteristics of sequentially evaporated $In_xGa_ySe_z$ thin films
K. Hondou, Y. Fujiwara, T. Kato, K. Iio, A. Saiki, M. Usuda and **N. Hamada**	1721	Characterization of magnetism and electronic properties of a ternary transition metal chalcogenide $Rb_2Ni_3S_4$
G. Marcano and **R. Márquez**	1725	Variable-range hopping conductivity and magnetoresistance in p-type Cu_2GeSe_3
H. L. Hwang, W. Y. Guo, Y. H. Tseng, B. H. Tzeng and **L. X. Shao**	1729	Improvement on the cyclability and stability of Ag–In–Sb–Te based compact disc by introduction of nitrogen and germanium
P. Fons, K. Sakurai, A. Yamada, K. Matsubara, K. Iwata, T. Baba, Y. Kimura, H. Nakanishi and **S. Niki**	1733	The chemical environment about Cd atoms in Cd chemical bath treated $CuInSe_2$ and $CuGaSe_2$
Th. Pauporté, A. Goux, A. Kahn-Harari, N. de Tacconi, C. R. Chenthamarakshan, K. Rajeshwar and **D. Lincot**	1737	Cathodic electrodeposition of mixed oxide thin films
L. Pierron, A. Kahn-Harari, B. Viana, P. Dorenbos and **C. W. E. van Eijk**	1743	X-ray excited luminescence of $Ce:Li_2CaSiO_4$, $Ce:CaBPO_5$ and $Ce:LiCaPO_4$
A. Bussmann-Holder	1749	Optical response, precursor effects, charge transfer and competing interactions in perovskite ferroelectrics
V. G. Voevodin, S. A. Bereznaja, O. V. Voevodina, Z. V. Korotchenko, N. C. Fernelius, M. C. Ohmer and **J. T. Goldstein**	1755	Doping of ternary compounds $CdGeAs_2$ and $CdSnAs_2$ by impurities of I, II and III groups
C. Bernay, A. Ringuedé, P. Colomban, D. Lincot and **M. Cassir**	1761	Yttria-doped zirconia thin films deposited by atomic layer deposition ALD: a structural, morphological and electrical characterisation
M. Nikravech, F. Rousseau, D. Morvan and **J. Amouroux**	1771	Production of perovskite deposits for fuel cells by plasma process
J. Cieslak, H. Metzner, Th. Hahn, U. Reislöhner, U. Kaiser, J. Kräußlich and **W. Witthuhn**	1777	Microstructure of epitaxial $CuGaS_2$ on Si(111)
J. Eberhardt, H. Metzner, Th. Hahn, U. Reislöhner, J. Cieslak, U. Grossner, R. Goldhahn, F. Hudert, G. Gobsch and **W. Witthuhn**	1781	Optical properties of epitaxial $CuGaS_2$ layers on Si(111)
M. Sugiyama, R. Nakai, H. Nakanishi and **Sf. Chichibu**	1787	Interface Fermi level pinning in a Cu/p-$CuGaS_2$ Schottky diode
B. Canava, J. F. Guillemoles, J. Vigneron, D. Lincot and **A. Etcheberry**	1791	Chemical elaboration of well defined $Cu(In,Ga)Se_2$ surfaces after aqueous oxidation etching
C. Hidaka, N. Makabe and **T. Takizawa**	1797	Determination of a pseudo-binary $SrSe–Ga_2Se_3$ phase diagram and single crystal growth of $SrGa_2Se_4$ compounds

S. Shirakata, T. Terasako, E. Niwa and K. Masumoto 1801 Photoluminescence of $AgGaS_2$ and $CuGaS_2$ doped with rare-earth impurities

T. Takizawa, H. Ozawa and C. Hidaka 1807 ESR study of Ce^{3+} ions doped in the $CdIn_2S_4$ lattice

Y. Shim, N. Mamedov and N. Yamamoto 1811 Polarized transmission intensity studies at and below energy gap of wide-gap single crystalline $CaGa_2S_4$

S. Iida, A. Kato, M. Tanaka, H. Najafov and H. Ikuno 1815 Photoluminescence characterization of rare-earth stoichiometric compounds of $EuGa_2S_4$

A. Bayramov, H. Najafov, A. Kato, M. Yamazaki, K. Fujiki, Md. Nazri and S. Iida 1821 Feasibility of TFEL application of Ce-doped $CaGa_2S_4$ and $SrGa_2S_4$ films prepared by flash evaporation method

H. Matsushita, Y. Tojo and T. Takizawa 1825 Schottky properties of $CuInSe_2$ single crystals grown by the horizontal Bridgman method with controlling Se vapor pressure

T. Yamaguchi, T. Naoyama, H. S. Lee, A. Yoshida, T. Kobata, S. Niiyama and T. Nakamura 1831 Preparation of $CuIn(S,Se)_2$ thin films by thermal crystallization in sulfur and selenium atmosphere

K. Oishi, H. Katagiri, S. Kobayashi and N. Tsuboi 1835 Growth of $Cu(In,Ga)S_2$ on Si(100) substrates by multisource evaporation

K. Yoshino, H. Komaki, T. Kakeno, Y. Akaki and T. Ikari 1839 Growth and characterization of p-type $AgInS_2$ crystals

J. Djordjevic, C. Pietzker and R. Scheer 1843 In situ XRD study of mixed $CuInSe_2$–$CuInS_2$ formation

M. Rusu, A. Rumberg, S. Schuler, S. Nishiwaki, R. Würz, S. M. Babu, M. Dziedzina, C. Kelch, S. Siebentritt, R. Klenk, Th. Schedel-Niedrig and M. Ch. Lux-Steiner 1849 Optimisation of the CBD CdS deposition parameters for ZnO/CdS/$CuGaSe_2$/Mo solar cells

T. Yamamoto, M. Nakamura, J. Ishizuki, T. Deguchi, S. Ando, H. Nakanishi and Sf. Chichibu 1855 Use of diethylselenide as a less-hazardous source for preparation of $CuInSe_2$ thin films by selenization of metal precursors

S. Fiechter, M. Martinez, G. Schmidt, W. Henrion and Y. Tomm 1859 Phase relations and optical properties of semiconducting ternary sulfides in the system Cu–Sn–S

Y. Akaki, H. Komaki, H. Yokoyama, K. Yoshino, K. Maeda and T. Ikari 1863 Structural and optical characterization of Sb-doped $CuInS_2$ thin films grown by vacuum evaporation method

G. Marín, G. S. Pérez, G. Marcano, S. M. Wasim and C. Rincón 1869 Characterization of $CuGaTe_2$ grown by the Tellurization of Cu and Ga in liquid phase

A. I. Najafov, G. G. Guseinov and O. Z. Alekperov 1873 Growth technology and X-ray investigation results of $CuFeSe_2$ crystal modifications

K. Sakurai, A. Yamada, P. Fons, K. Matsubara, T. Kojima, S. Niki, T. Baba, N. Tsuchimochi, Y. Kimura and H. Nakanishi 1877 Adjusting the sodium diffusion into $CuInGaSe_2$ absorbers by preheating of Mo/SLG substrates

A. Janotti and S.-H. Wei 1881 Epitaxially stabilized $AgGaSe_2$ for high-efficiency spin-polarized electron source

H.-S. Lee, H. Okada, A. Wakahara, T. Ohshima, H. Itoh, S. Kawakita, M. Imaizumi, S. Matsuda and **A. Yoshida**	1887	3 MeV electron irradiation-induced defects in $CuInSe_2$ thin films
S. Nomura and **S. Endo**	1891	Bond properties of the chalcopyrite and stannite phases in the Cu–(In,Ga)–Se system
N. S. Orlova, I. V. Bodnar and **T. L. Kushner**	1895	Structural and physical–chemical properties of the $CuGa_5Se_8$, $CuGa_3Se_5$ and $CuIn_3Se_5$ compounds
G. L. Gu, B. H. Tseng and **H. L. Hwang**	1901	Photoluminescence properties of a near-stoichiometric $CuGaSe_2$ film
L. Durán, C. Guerrero, E. Hernández, J. M. Delgado, J. Contreras, S. M. Wasim and **C. A. D. Rincón**	1907	Structural, optical and electrical properties of $CuIn_5Se_8$ and $CuGa_5Se_8$
E. I. Rogacheva and **T. V. Tavrina**	1911	Nonstoichiometry of $CuInSe_2$ and method of controlled atomic defects
T. V. Tavrina and **E. I. Rogacheva**	1917	Effect of CdS on $CuInSe_2$ structure and properties
W. Gehlhoff, D. Azamat, A. Hoffmann and **N. Dietz**	1923	Structure and energy level of native defects in as-grown and electron-irradiated zinc germanium diphosphide studied by EPR and photo-EPR
I. Askerov and **Ş. Okuducu**	1929	Electron spin resonance and luminescence in $Ga_{2-x}Eu_xS_3$ single crystals
S. Ozaki, K.-i. Muto and **S. Adachi**	1935	Optical properties and electronic band structure of $CdGa_2Te_4$
P. C. Ricci, A. Anedda, R. Corpino, I. M. Tiginyanu and **V. V. Ursaki**	1941	Photoconductive properties of $HgGa_2S_4$
Y. Nagasaka, H. Ohta, K. Kawakami, A. Ueda, S. Ono, Y. Ikeuchi, T. Nanba, A. Hirano and **R. Kanno**	1949	Millimeter wave spectroscopy of secondary battery substance $Li_{1-x}Ni_{1+x}O_2$
I. I. Parfenova and **A. I. Rumyantseva**	1953	A simple model of structural disorder in III–V quaternary alloys
N. Yamamoto, N. Mamedov, Y. Shim, C. Hidaka, T. Takizawa, E. Niwa and **K. Masumoto**	1959	Light figure spectroscopy of optically active anisotropic materials
N. Mamedov, H. Toyota, N. Yamamoto and **S. Iida**	1963	Light scattering and ellipsometric studies at and below energy gap: polycrystalline calcium and strontium thiogallates
N. N. Syrbu, V. V. Ursaki, I. M. Tiginyanu, V. E. Tezlevan and **M. A. Blaje**	1967	The interference of additional waves of forbidden polaritons excited by allowed polaritons in $CuGaS_2$
K. Wakita, K. Nishi, Y. Ohta and **G. Hu**	1973	Temperature dependence of time-resolved free exciton in $CuInS_2$ crystals
E. Rudigier, J. Alvarez-Garcia, I. Luck, J. Klaer and **R. Scheer**	1977	Quality assessment of chalcopyrite thin films using Raman spectroscopy
A. Eifler, E. A. Kudritskaya, I. V. Bodnar and **V. Riede**	1983	Infrared and Raman study of lattice vibrations of $CuAlSe_2$ single crystals
E. P. Zaretskaya, V. F. Gremenok, V. Riede, W. Schmitz, K. Bente, V. B. Zalesski and **O. V. Ermakov**	1989	Raman spectroscopy of $CuInSe_2$ thin films prepared by selenization

S. M. Wasim, G. Marín, C. Rincón, R. Márquez, C. Torres and **A. Rincón** 1995 Effect of localized modes in the absorption spectra of $CuInTe_2$, $CuIn_3Te_5$ and $CuIn_5Te_8$

T. Honda, K. Hara, J. Yoshino and **H. Kukimoto** 2001 Emission characteristics of $CuGaS_2$-based light-emitting diode grown by metalorganic vapor phase epitaxy

M. V. Yakushev, A. V. Mudryi, V. F. Gremenok, V. B. Zalesski, P. I. Romanov, Y. V. Feofanov, R. W. Martin and **R. D. Tomlinson** 2005 Optical properties and band gap energy of $CuInSe_2$ thin films prepared by two-stage selenization process

M. V. Yakushev, Y. Feofanov, R. W. Martin, R. D. Tomlinson and **A. V. Mudryi** 2011 Magneto-photoluminescence study of radiative recombination in $CuInSe_2$ single crystals

S. Iida, H. Ichinokura, Y. Toyama and **A. Kato** 2017 Photoluminescence of site-selectively Zn-doped $CuGaS_2$/GaP epitaxial layers

S. Shirakata and **H. Miyake** 2021 Photoreflectance of $CuInS_2$ single crystal prepared by traveling heater method

A. Mere, O. Kijatkina, H. Rebane, J. Krustok and **M. Krunks** 2025 Electrical properties of sprayed $CuInS_2$ films for solar cells

I. E. Beckers, U. Fiedeler, S. Siebentritt and **M. Ch. Lux-Steiner** 2031 Voltage dependent electromodulated photoluminescence of chalcopyrite solar cells

M. Rusu, W. Eisele, R. Würz, A. Ennaoui, M. Ch. Lux-Steiner, T. P. Niesen and **F. Karg** 2037 Current transport in ZnO/ZnS/Cu(In,Ga)$(S,Se)_2$ solar cell

M. Igalson, M. Bodegård and **L. Stolt** 2041 Recombination centers in the Cu(In,Ga)Se_2-based photovoltaic devices

H. H. Chang, H. Y. Ueng and **H. L. Hwang** 2047 Preliminary steps toward industrialization of Cu-III-VI_2 thin-film solar cells: development of an intelligent design tool for non-stoichiometric photovoltaic materials

H. Miyazaki, R. Mikami, A. Yamada and **M. Konagai** 2055 Cu(InGa)Se_2 thin film absorber with high Ga contents and its application to the solar cells

S. Noguchi, S. Kawamata, T. Ogomi, M. Yamamoto and **T. Ishida** 2059 Magnetic study of CMR perovskite manganite $(Pr,Ca)MnO_{3-\delta}$: spin-flop in antiferromagnetic state and anomalous microwave response with the charge ordering

S. Pal, A. Banerjee and **B. K. Chaudhuri** 2063 Study of magnetization and transport properties in $La_{0.7}Pb_{0.3}MnO_3$ with the addition of nonmagnetic Ag

V. Samokhvalov, S. Unterricker, I. Burlakov, F. Schneider, M. Dietrich, V. Tsurkan, I. M. Tiginyanu and **The ISOLDE Collaboration** 2069 Investigation of ferromagnetic spinel semiconductors by hyperfine interactions of implanted nuclear probes

Y. B. He, W. Kriegseis, T. Krämer, A. Polity, M. Hardt, B. Szyszka and **B. K. Meyer** 2075 Deposition of $CuInS_2$ thin films by RF reactive sputtering with a ZnO:Al buffer layer

Number 11

S. E. Ziemniak and **R. A. Castelli** 2081 Immiscibility in the Fe_3O_4–$FeCr_2O_4$ spinel binary

W. Kucharczyk and **F. L. Castillo Alvarado** 2093 Bond polarizability calculations of hyper-Raman scattering in sodium, potassium and rubidium halides

A. M. Serventi, R. Dolbec, M. A. El Khakani, R. G. Saint-Jacques and **D. G. Rickerby** 2097 High-resolution transmission electron microscopy investigation of the nanostructure of undoped and Pt-doped nanocrystalline pulsed laser deposited SnO_2 thin films

B. Harihara Venkataraman and **K. B. R. Varma** 2105 Impedance and dielectric studies of ferroelectric $SrBi_2Nb_2O_9$ ceramics

G. A. Voronin, C. Pantea, T. W. Zerda, J. Zhang, L. Wang and **Y. Zhao** 2113 In situ X-ray diffraction study of germanium at pressures up to 11GPa and temperatures up to 950K

D. Dong, K. Xiao-Yu and **L. Wei** 2121 Analysis of ground-state zero-field splitting for Mn^{2+} in hexagonal $ZnS:Mn^{2+}$

O. L. Anderson, D. G. Isaak and **V. E. Nelson** 2125 The high-pressure melting temperature of hexagonal close-packed iron determined from thermal physics

A. El-Korashy and **K. J. Roberts** 2133 Studies of the electrical properties of nearly perfect K_2ZnCl_4 single crystals as measured during commensurate incommensurate-paraelectric phase transitions

A. El-Korashy, H. El-Zahed and **M. Radwan** 2141 Optical studies of $(NH_4)_2SO_4$ single crystal in the paraelectric phase

L. Chonghe, T. Yihao, Z. Yingzhi, W. Chunmei and **W. Ping** 2147 Prediction of lattice constant in perovskites of $GdFeO_3$ structure

M. E. Mendoza, F. Donado and **J. L. Carrillo** 2157 Synthesis and characterization of micrometric ceramic powders for electro-rheological fluids

M. González, P. D. Townsend, G. Gonzalez and **D. E. Hole** 2163 Influence of helium implantation of optical fibre faceplates on acid etching

M. K. Marchewka and **A. Pietraszko** 2169 Structure and spectra of melaminium citrate

M. Catti, Y. Noel and **R. Dovesi** 2183 Full piezoelectric tensors of wurtzite and zinc blende ZnO and ZnS by first-principles calculations

P. K. Chakraborty, B. Nag and **K. P. Ghatak** 2191 On the electron energy spectrum in heavily doped non-parabolic semiconductors

R. F. de Farias and **C. Airoldi** 2199 Some structural features of MoO_3-1,10-phenanthroline intercalation compounds

H. C. Gupta and **S. Brown** 2205 An analytical expression for E_g and A_g modes of pyrochlores

W. Gille, D. Enke and **F. Janowski** 2209 Application of small-angle scattering for the identification of small amounts of platinum supported on porous silica

H.-J. Oh, Y. Jeong, S.-J. Suh, Y.-J. Kim and **C.-S. Chi** 2219 Electrochemical characteristics of alumina dielectric layers

S. Hayashi 2227 Diffusion of hydrogen isotopes in the monohydride phase of $Ti1-zV_zH_xD_y$ studied by ^1H and ^2H NMR spin–lattice relaxation times

A. Shimizu and **H. Tachikawa** 2235 Molecular dynamics calculation on three lithium atoms in planar cluster model $C_{150}H_{30}$ for glassy carbon

R. Ochoa-Landín, M. Flores-Acosta, R. Ramírez-Bon, H. Arizpe-Chávez, M. Sotelo-Lerma and **F. F. Castillón-Barraza** 2245 Characterization of Cds clusters in zeolite-A grown in alkaline solution

A. Kremenović, Ph. Colomban, B. Piriou, D. Massiot and **P. Florian** 2253 Structural and spectroscopic characterization of the quenched hexacelsian

H. Nambu, M. Ichikawa, T. Gustafsson and **I. Olovsson** 2269 X-ray diffraction study of KOCN at room temperature

W. De La Cruz, J. A. Díaz, L. Mancera, N. Takeuchi and **G. Soto** 2273 Yttrium nitride thin films grown by reactive laser ablation

A. Agarwal, V. P. Seth, P. S. Gahlot, S. Khasa and **P. Chand** 2281 Effect of Bi_2O_3 on EPR, optical transmission and DC conductivity of vanadyl doped alkali bismuth borate glasses

F. J. Owens 2289 Ferromagnetic resonance of magnetic field oriented Fe_3O_4 nanoparticles in frozen ferrofluids

E. Kalashnikov, I. Tolstikhin, B. Lehmann and **B. Pevzner** 2293 Helium transport along lattice channels in crystalline quartz

X. Xu and **Y. P. Feng** 2301 Excitons in coupled quantum dots

Number 12

M. T. Soltani, A. Boutarfaia, R. Makhloufi and **M. Poulain** 2307 New alkali antimonate glasses

R. Laiho, K. G. Lisunov, E. Lähderanta, P. A. Petrenko, J. Salminen, V. N. Stamov, Yu. P. Stepanov and **V. S. Zakhvalinskii** 2313 Low-field magnetic properties of $LaMnO_{3+\delta}$ with $0.065 \leq \delta \leq 0.154$

S. E. Stoltz, H. I. Starnberg and **M. W. Barsoum** 2321 Core level and valence band studies of layered Ti_3SiC_2 by high resolution photoelectron spectroscopy

C. Shiyamala, R. Venkatesan and **P. Sambasiva Rao** 2329 Single crystal EPR studies of Mn(II) doped zinc sodium sulphate hexahydrate: a case of interstitial substitution

C. Sudakar, G. N. Subbanna and **T. R. N. Kutty** 2337 Effect of anions on the phase stability of γ-FeOOH nanoparticles and the magnetic properties of gamma-ferric oxide derived from lepidocrocite

D. H. An, K. U. Kang, B. G. Lee, J. B. Lim, S. U. Jang, K. S. Baek and **H. N. Oak** 2351 Mössbauer study of $Zn_{0.4}Cu_{0.6}Fe_{1.2}Cr_{0.8}O_4$

S. Kashida, W. Shimosaka, M. Mori and **D. Yoshimura** 2357 Valence band photoemission study of the copper chalcogenide compounds, Cu_2S, Cu_2Se and Cu_2Te

S. Y. Wu, Y. Li and **X. M. Chen** 2365 Raman spectra of $Ba_{6-3x}Sm_{8+2x}Ti_{18}O_{54}$ solid solution

B. K. Singh, M. K. Roy, V. J. Menon and **K. C. Sood** 2369 Dispersive effects and correction term in two-mode phonon conduction model for Ge

X. Huang, Z. Liu, Z. Lu, L. Pei, R. Zhu, Y. Liu, J. Miao, Z. Zhang and **W. Su** 2379 A Ni/YSZ composite containing $Ce_{0.9}Ca_{0.1}O_{2-\delta}$ particles as an anode for SOFCs

R. F. de Farias, U. Arnold, L. Martínez, U. Schuchardt, M. J. D. M. Jannini and **C. Airoldi** 2385 Synthesis, characterization and catalytic properties of sol–gel derived mixed oxides

G. P. Joshi, N. S. Saxena, T. P. Sharma, V. Dixit and **S. C. K. Mishra** 2391 Thermal transport in chemically doped polyaniline materials

A. Shimizu and **H. Tachikawa** 2397 Molecular dynamics simulation for sodium atom in and on the two layers of $C_{150}H_{30}$ graphite plane

J. Awaka, R. Endoh and **S. Nagata** 2403 Van Vleck paramagnetism of the thulium garnet $Tm_3Al_5O_{12}$

L. L. Díaz-Flores, P. P. Horley, J. González-Hernández, J. J. Pérez-Bueno, Yu. V. Vorobiev and **P.M. Gorley** 2409 Molecular aggregation and shape effects in the optical spectra of organic dye molecules in SiO_2 and SiO_2-PMMA matrices

S. Matsushima, K. Obata, H. Nakamura, M. Arai and **K. Kobayashi** 2417 First-principles energy band calculation for undoped and N-doped $InTaO_4$ with layered wolframite-type structure

M. H. Herbst and **G. H. M. Dias** 2423 Chemical reactivity of solid [Pt*n*C60] towards carbon monoxide

M. Ashry and **S. Fares** 2429 Diffusion length analysis and measurement in the base region of photodiodes

R. V. S. S. N. Ravikumar, K. Ikeda, A. V. Chandrasekhar, Y. P. Reddy, P. S. Rao and **J. Yamauchi** 2433 Site symmetry of Mn(II) and Co(II) in zinc phosphate glass

A. Cannizzo, S. Agnello, R. Boscaino, M. Cannas, F. M. Gelardi, S. Grandi and **M. Leone** 2437 Role of vitreous matrix on the optical activity of Ge-doped silica

Z. G. Hu, G. S. Wang, Z. M. Huang and **J. H. Chu** 2445 Structure-related infrared optical properties of $BaTiO_3$ thin films grown on Pt/Ti/SiO_2/Si substrates

H. Xi, B. Wang, Y. Zhang, X. Qian, J. Yin and **Z. Zhu** 2451 Spectroscopic studies on conjugated polymers in mesoporous channels: influence of polymer side-chain length

M. A. L. Nobre and **S. Lanfredi** 2457 Dielectric spectroscopy on $Bi_3Zn_2Sb_3O_{14}$ ceramic: an approach based on the complex impedance

F. A. Radwan, M. A. Ahmed and **G. Abdelatif** 2465 Screening effect of Ti^{4+} ions on the electrical conductivity and thermoelectric power of Mg ferrite

A. A. Lavrentyev, B. V. Gabrelian, I. Ya. Nikifororv, J. J. Rehr and **A. L. Ankudinov** 2479 Electronic structure and chemical bonding of phosphorus-contained sulfides $InPS_4$, Tl_3PS_4, and $Sn_2P_2S_6$

Y. C. Ratnakaram, D. Thirupathi Naidu, A. Vijaya Kumar and **J. L. Rao** 2487 Characterization of Tm^{3+} doped mixed alkali borate glasses—spectroscopic investigations

D. Varshney, K.K. Choudhary and **R.K. Singh** 2497 Interpretation of anomalous normal state optical conductivity of La–Sr–CuO cuprates

M. Vos, A. S. Kheifets, V. A. Sashin and **E. Weigold** 2507 Influence of electron diffraction on measured energy-resolved momentum densities in single-crystalline silicon

Z. Wang, D. Schiferl, Y. Zhao and **H. St. C. O'Neill** 2517 High pressure Raman spectroscopy of spinel-type ferrite $ZnFe_2O_4$

Y.-I. Jang, F. C. Chou, B. Huang, D. R. Sadoway and **Y.-M. Chiang** 2525 Magnetic characterization of orthorhombic $LiMnO_2$ and electrochemically transformed spinel Li_xMnO_2 ($x < 1$)

I. Sougandi, R. Venkatesan and **P. S. Rao** 2535 Erratum to "Electron paramagnetic resonance of vanadyl ions in camium sodium phosphate" [Journal of Physics and Chemistry of Solids 64 (8) (2003) 1231–1236]